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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/994,447	12/19/1997	KAZUMI SUGA	35C12464	6639
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NEW YORK, NY 10112

EXAMINER

SRIVASTAVA, VIVEK

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

214



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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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06/994,447

EXAMINER

ART UNIT PAPER NUMBER

2611

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DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 5/24/02 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire _____ month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☐ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐ _____

Part II SUMMARY OF ACTION

- ☒ Claims 1-2/ are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
- ☐ Claims _____ have been cancelled.
- ☐ Claims _____ are allowed.
- ☒ Claims 1-2/ are rejected.
- ☐ Claims _____ are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.
- ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
- ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
- ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

Art Unit: 2611

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. Claims 1 - 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kesatoshi et al (5,874,937).

Considering claims 1, 9, 13, 19, 20 and 21 Kesatoshi discloses an input means for inputting an image signal (fig 11, Vpc Stv1, Stv2 meets "input image signal" limitation), wherein the "Vpc" is a computer signal generated from a computer and "stv1" and Stv2" are television generated signals) wherein the signals are input to video selection unit 200. Kesatoshi discloses a resolution determination unit (see item 28 in fig 11) for determining the resolution if the input signal, the resolution determination unit meets the "judgement unit" limitation. The resolution must be measured or judged to determine how much interpolation is needed to match the resolution of the input image signal to that of the display device. Regarding the claimed 'detection unit arranged to detect a change between pictures', when a user selects between input signals STV1, STV2 and VPC (see col 8 line 63 - col 9 line 5), a means must inherently be

Art Unit: 2611

included to detect the change in input signals to match the input image resolution to that of the display and a the claimed 'interpolation means' is met by the scaling means (col 1 lines 41 - 50, col 2 lines 5 - 29)

Considering claim 2, Kesatoshi discloses the claimed computer display and television (see col 3 lines 1 - 29, col 8 line 54 - col 9 line 22, col 3 lines 52-67).

Considering claim 3, Kesatoshi discloses converting the image signal of the television (STV1, STV2, see fig 11) format from a field unit signal into a frame unit signal (col 8 line 54 - col 9 line 22) by digitizing the signal (see 'ADC 32' in fig 11).

Considering claim 4, Kesatoshi discloses interpolating the horizontal and vertical resolution (see col 3 line 53 - col 4 line 38) which meets the limitation of interpolating the image signal to have a horizontal resolution same as the horizontal resolution of a display device, if said detection means detects that the change in the image signal is large. This broad limitation is met since Kesatoshi discloses detecting changes (which include large changes) in the input horizontal resolution to match the horizontal resolution of the display device. Further, the claimed "and in other cases, interpolates the image signal to have a horizontal and vertical resolution same as the horizontal and vertical resolutions of the display" is met by interpolating a vertical resolution of 400 lines and horizontal resolution of 640 dots to a vertical resolution of 600 lines and horizontal resolution of 800 dots (see col 3 lines 55 - 60).

Art Unit: 2611

. Considering claim 5, Kesatoshi discloses down-converting and contracting the resolution of the input image (col 9 lines 6 - 22, col 1 lines 39 - 50 and col 3 lines 52 - 60) which meets the claimed limitation.

Considering claim 6, Kesatoshi discloses interpolating the image signal to display the same resolution of the image as that of the display thus meeting the claimed limitation (see col 3 line 53 - col 4 line 38, see CPU 11 in fig 11 meets "control unit").

Considering claim 7, Kesatoshi discloses the claimed wherein the judgement unit judges a resolution in accordance with a sync signal contained in the image signal (col 1 lines 57-65).

Considering claim 8, Kesatoshi discloses the claimed wherein the judgement unit judges resolution by measuring horizontal and vertical sync signals contained in the image signal (col 4 lines 8 - 67, col 5 lines 27-35).

Considering claim 10, Kesatoshi discloses displaying a signal with various resolutions on a monitor by adjusting the resolution of the input resolution or mode to that of the display.

Further, Kesatoshi discloses, a video scaler can change the resolution of a video image to a desired resolution of the display device (col 9 lines 15-20), this would include matching the horizontal resolution of the input signal to that of the display. In particular, Kesatoshi discloses matching the horizontal and vertical resolution (see '640 dots' by '400 lines' in col 3 lines 55-60) of a VPC signal to that of the display (see '800 dots' by '600 lines' in col 3 lines 55-60). Further, Kesatoshi discloses the resolution (including horizontal) of the STV1 and STV2 input signals can be interpolated to match that of the display (see col 8 line 40 - col 9 line 22).

Art Unit: 2611

Considering claim 11, see claim 7.

Considering claim 12, see claim 8.

Considering claim 14, Kesatoshi discloses interpolating the vertical and horizontal resolutions of the input image signal to match the display (col 6 lines 20-22). Kesatoshi also discloses scaling or interpolating the input television signal (STV1, STV2) to match the resolution of the display (col 8 lines 63 - col 9 line 22). Matching the television resolution to the resolution of the display would include a horizontal resolution, thus Kesatoshi discloses the claimed “interpolation unit interpolates the television input image signal to have the a horizontal resolution same as the resolution of the display device”. Further, Kesatoshi discloses interpolating the vertical resolution (640 dots) and horizontal resolution (600 lines) of an input computer signal to that of the display (800 dots by 600 lines) if a VPC (computer signal) is selected and detected (col 8 line 63 - col 9 line 22).

Considering claim 15, Kesatoshi discloses a CPU (meeting the ‘control means’ limitation, see CPU 20 in fig 11) for interpolating and displaying the same input television signal on a plurality of lines of a display (i.e. 600 lines, see col 3 lines 57-60).

Considering claim 16, see claim 7.

Considering claim 17, see claim 8.

Considering claim 18, see claim 3.

Art Unit: 2611

Allowable Subject Matter

3. The Allowability of claims 10, 14 and 15 have been withdrawn in view of the new rejection above.

Response To Arguments

Applicant argues that Kesatoshi does not teach or suggest interpolating the image signal in the manner recited in Applicant's claimed invention. For example, the Applicant argues, in claims 1 and 19, Kesatoshi fails to teach interpolating the image signal based on the judgement results of the resolution image signal and the detection of a change between pictures of the image signal, in claims 9 and 20, Kesatoshi fails to teach the image signal is interpolated in accordance with the judgement results of the image signal and the selection results of a first display mode and a second display mode, and in claims 23 and 21, Kesatoshi fails to teach interpolating based on the judgement results of the resolution of the input image signal and the selection results of the input computer image signal or the television input image signal.

Regarding claims 1 and 19, the Examiner respectfully disagrees with Applicant's assertion that Kesatoshi fails to disclose interpolating the image signal based on the judgement results of the resolution image signal and the detection of a change between pictures of the image signal.

Regarding the 'judgment results of the resolution of the image signal', the Examiner maintains

Art Unit: 2611

that in order to interpolate or scale the input image to resolution of the display, the input resolution must first be measured or judged to see how much interpolation is needed. Regarding the 'detection unit arranged to detect a change between pictures', when a user selects between input signals STV1, STV2 and VPC (see col 8 line 63 - col 9 line 5), a means must inherently be included to detect the change in input signals to match the input resolution to that of the display. As a result, the Applicant's arguments are not persuasive.

Regarding claims 9 and 20, as discussed above, Kesatoshi discloses interpolating in accordance with judgement results and results in selecting STV1, STV2 and VPC. As a result, the Applicant's are not persuasive.

Regarding claims 13 and 21, as discussed above, Kesatoshi discloses interpolation based on the judgement results of the resolution of the input signal and selection results of selecting a computer image signal (VPC, see col 8 lines 63 +) or a television image signal (STV1 or STV2, see col 8 lines 63 +).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sekine et al (5,754,710) - Image resolution conversion

Silverberg (4,670,773) - Increasing television resolution

Art Unit: 2611

Welman et al (5,103,306) - Digital image compression employing a resolution gradient

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

(703) 308- 5399 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

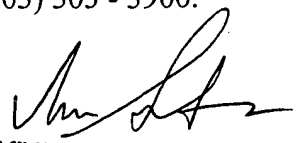
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivek Srivastava whose telephone number is (703) 305 - 4038. The examiner can normally be reached on Monday - Thursday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andy Faile, can be reached at (703) 305 - 4380.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305 - 3900.

VS 8/10/02


VIVEK SRIVASTAVA
PATENT EXAMINER